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Committee on the Peaceful Uses of Outer Space
Legal Subcommittee
Fifty-seventh session
Vienna, 9–20 April 2018

Draft report

I. Introduction

A. Opening of the session

1. The Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space held its fifty-seventh session at the United Nations Office at Vienna from 9 to 20 April 2018. At its 957th meeting, on 9 April, Andrzej Misztal (Poland) was elected Chair for the period 2018–2019, pursuant to General Assembly decision 72/518.

2. The Subcommittee held [...] meetings.

B. Adoption of the agenda

3. At its 957th meeting, on 9 April, the Subcommittee adopted the following agenda:

1. Adoption of the agenda.
2. Election of the Chair.
3. Statement by the Chair.
4. General exchange of views.
5. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.
6. Status and application of the five United Nations treaties on outer space.
7. Matters relating to:
   (a) The definition and delimitation of outer space;
   (b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.
8. National legislation relevant to the peaceful exploration and use of outer space.

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9. Capacity-building in space law.

10. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

11. General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee.

12. General exchange of information on non-legally binding United Nations instruments on outer space.

13. General exchange of views on the legal aspects of space traffic management.

14. General exchange of views on the application of international law to small-satellite activities.

15. General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources.

16. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-eighth session.

C. Attendance

4. Representatives of the following [68] States members of the Committee attended the session: Algeria, Argentina, Armenia, Australia, Austria, Belarus, Belgium, Bolivia (Plurinational State of), Brazil, Bulgaria, Burkina Faso, Canada, Chile, China, Costa Rica, Cuba, Czechia, Denmark, Ecuador, Egypt, El Salvador, France, Germany, Greece, Hungary, India, Indonesia, Iran (Islamic Republic of), Israel, Italy, Japan, Jordan, Kazakhstan, Libya, Luxembourg, Malaysia, Mexico, Mongolia, Morocco, Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Peru, Philippines, Poland, Portugal, Republic of Korea, Romania, Russian Federation, Saudi Arabia, Slovakia, South Africa, Spain, Sudan, Sweden, Switzerland, Tunisia, Turkey, Ukraine, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela (Bolivarian Republic of) and Viet Nam.

5. At its 957th meeting, on 9 April, the Subcommittee decided to invite, at their request, observers for Cyprus, the Dominican Republic, Finland, Malta, Myanmar, Paraguay and Singapore to attend the session and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

6. At its 957th meeting, on 9 April, the Subcommittee also decided to invite, at its request, the observer for the European Union to attend the session, in accordance with General Assembly resolution 65/276, entitled "Participation of the European Union in the work of the United Nations", and to address it, as appropriate, on the understanding that it would be without prejudice to further requests of that nature and that doing so would not involve any decision of the Committee concerning status.

7. Observers for the Office for Disarmament Affairs of the Secretariat and the International Telecommunication Union (ITU) attended the session.

8. The session was attended by observers for the following intergovernmental organizations having permanent observer status with the Committee: Asia-Pacific Space Cooperation Organization (APSCO), Centre for Remote Sensing of the North African States (CRTEAN), European Space Agency (ESA), European Telecommunications Satellite Organization (EUTELSAT-IGO), International Organization of Space Communications (Intersputnik) and International Telecommunications Satellite Organization.

9. The session was also attended by observers for the following non-governmental organizations having permanent observer status with the Committee: European Centre for Space Law (ECSL), European Space Policy Institute (ESPI), Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, International Institute of Space Law (IISL), International Law Association (ILA), National Space Society (NSS), Secure World Foundation (SWF), Space Generation Advisory Council (SGAC) and World Space Week Association (WSWA).

10. A list of the representatives of States, United Nations entities and other international organizations attending the session is contained in document A/AC.105/C.2/2018/INF/[...].

D. Symposium

11. On 9 April, IISL and ECSL held a symposium on the theme "The fiftieth anniversary of the Rescue Agreement: relevance and challenges", co-chaired by Kai-Uwe Schrogl of IISL and Sergio Marchisio of ECSL. The symposium was opened with a statement of welcome by the Co-Chairs and by the Chair of the Subcommittee, and the Subcommittee subsequently heard the following presentations: "The drafting and history of the Rescue Agreement", by Elina Morozova; "'Return to sender': 50 years of the Rescue Agreement and the role of the United Nations", by Niklas Hedman; "The return of space objects: legal annotations and practical experience", by Alexander Soucek; "Perspectives on the concept of astronaut and private space flight", by Andrew Kuh; "Contemporary aspects of the Rescue Agreement turning 50", by Jose Monserrat Filho; and "The future of the Rescue Agreement and how to meet the challenges: the role of the Legal Subcommittee and UNISPACE+50", by Setsuko Aoki. Concluding remarks were made by the Co-Chairs of the symposium and the Chair of the Subcommittee. The presentations delivered during the symposium were made available on the website of the Office for Outer Space Affairs of the Secretariat (www.unoosa.org/oosa/en/ourwork/copuos/lsc/2018/symposium.html).

12. The Subcommittee noted with appreciation that the symposium had constituted a valuable contribution to its work.

E. Adoption of the report of the Legal Subcommittee

13. At its [...] meeting, on [...] April, the Subcommittee adopted the present report and concluded the work of its fifty-seventh session.

II. General exchange of views

14. Statements were made by representatives of the following States members of the Committee during the general exchange of views: Algeria, Argentina, Armenia, Australia, Austria, Brazil, Canada, Chile, China, Cuba, Czechia, Denmark, France, Germany, India, Indonesia, Iran (Islamic Republic of), Italy, Japan, Luxembourg, Mexico, New Zealand, Pakistan, Poland, Republic of Korea, Russian Federation, South Africa, Turkey, Ukraine and United States. Statements were made by the representative of Nigeria on behalf of the Group of 77 and China and the representative of the Plurinational State of Bolivia on behalf of the Group of Latin American and Caribbean States. The observer for the European Union made a statement on behalf of the European Union and its member States. The observer for Finland made a statement. The observers for APSCO, ESA, NSS, SGAC and SWF also made statements.

15. The Subcommittee heard a presentation entitled "The eighteenth Sustainable Development Goal: recognizing the imperative role of space in our future", by the representative of NSS.

16. The Subcommittee welcomed Bahrain, Denmark and Norway as the newest States members of the Committee on the Peaceful Uses of Outer Space, bringing the membership of the Committee to 87 States. The Subcommittee also welcomed the European Science Foundation (ESF), represented by the European Space Sciences Committee, and UNISEC-Global, as the newest permanent observers of the Committee.

17. The Subcommittee took note of the applications of Finland (contained in conference room paper A/AC.105/C.2/2018/CRP.5) and Mauritius (contained in conference room paper A/AC.105/C.2/2018/CRP.4) for membership in the Committee, and the applications for the status of permanent observer of the Committee, received from the European Union (contained in conference room paper A/AC.105/C.2/2018/CRP.6), as well as from the International Standards Organization (contained in conference room paper A/AC.105/C.2/2018/CRP.7)and from CANEUS International (contained in conference room paper A/AC.105/C.2/2018/CRP.19). The Subcommittee noted that the applications would be considered by the Committee at its sixty-first session, in June 2018.

18. At the 957th meeting, on 9 April, the Chair made a statement in which he highlighted the programme of work and organizational matters pertaining to the current session of the Subcommittee.

19. At the same meeting, the Subcommittee heard a statement prepared by the Director of the Office for Outer Space Affairs, in which she reaffirmed the Office's commitment to discharging the Secretary-General's responsibilities under international space law, in particular in connection with transparency and confidence-building to ensure the safety, security and sustainability of outer space activities. She presented an overview of recent activities of the Office, highlighting efforts undertaken to prepare for UNISPACE+50, in 2018. She also drew the attention of the Subcommittee to the unfavourable financial situation of the Office, the reduction in the level of the Office's human resources and the ongoing efforts of the Office to improve its resource framework.

20. The Subcommittee took note with appreciation of the information on the activities of the Office aimed at promoting understanding, acceptance and implementation of international space law. In addition, the Subcommittee expressed its appreciation for the excellent work, including the preparation of documentation, done by the Secretariat for the current session of the Subcommittee.

21. The Subcommittee noted with appreciation the events held on the margins of the current session, namely a lunch-time event entitled "The Hague International Space Resources Governance Working Group: discussion on the 19 draft building blocks", organized by the National Point of Contact for Space Law Austria of ECSL, and an evening event [...], organized by ESPI.

22. The Subcommittee noted the instrumental role it had played in the development of the legal regime governing the use of outer space activities for peaceful purposes and in efforts to provide a unique multilateral platform at the global level for enhancing international cooperation for the benefit of all countries, in particular in the area of using space applications for sustainable development, including within the context of the 2030 Agenda for Sustainable Development.

23. The Subcommittee welcomed the adoption by the General Assembly, in its resolution 72/78, of the Declaration on the fiftieth anniversary of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.

24. The Subcommittee agreed that UNISPACE+50 offered a unique opportunity for countries to reflect on the achievements of more than 50 years of space exploration and look towards the future, strengthening the mandates of the Committee, its subsidiary bodies and the Office, as unique platforms for international space cooperation, in order to align their work with the current challenges and opportunities in the space arena, making them fit for purpose and responsive to new realities in

space endeavours, such as an ever-growing number of actors and the diversification of both space actors and space activities.

25. Some delegations expressed the view that one of the important objectives of UNISPACE+50 would be the creation of momentum for reaching consensus on a "Space2030" agenda for the contribution of space activities to the achievement of the Sustainable Development Goals. Such space activities utilized space science and technology and their applications, which were crucial to achieving global initiatives including the 2030 Agenda for Sustainable Development; the Addis Ababa Action Agenda, which established a strong foundation to support the implementation of the 2030 Agenda for Sustainable Development; the Sendai Framework for Disaster Risk Reduction 2015–2030; and the Paris Agreement. In that connection, the delegations expressing that view were also of the view that achieving such a noble goal required the strengthening of global partnerships, including by enhancing the role and the capacity of the regional centres for space science and technology education, affiliated to the United Nations, and of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER).

26. The Subcommittee agreed that the existing international legal regime governing outer space provided a sound basis for undertaking space activities and that States should be encouraged to adhere to the existing legal regime in order to strengthen its effect.

27. Some delegations expressed the view that the existing international legal framework governing outer space activities enabled States to benefit from activities conducted in outer space, and that it was essential to continue to seek universal adherence to and application of the United Nations treaties on outer space.

28. The view was expressed that the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, was the foundation of all other United Nations treaties and principles on outer space; it enjoyed the participation of a wide range of States and it contained comprehensive norms dealing with almost all aspects of space activities conducted by States and their national entities.

29. The view was expressed that the principles, declarations and guidelines for the peaceful use of outer space in the form of General Assembly resolutions that had been developed in the Committee had been playing an important role that complemented the existing United Nations treaties on outer space.

30. The view was expressed that national regulation of the exploration and use of outer space should not be conducted against the obligations of States under the United Nations treaties on outer space.

31. Some delegations expressed the view that in order to preserve outer space for generations to come and to enable them to have access to the benefits derived from the use of space technologies, it would be necessary for the Subcommittee to identify legal aspects that would lead to ensuring the sustainability of outer space activities, so that scientific and technological advances could become strengths that were accompanied by a legal framework.

32. Some delegations expressed the view that the United Nations treaties and principles on outer space provided the basis for regulating outer space activities, and recognized the need for work to be undertaken to warrant a safe and sustainable environment for outer space activities. In that regard, the delegations expressing that view were also of the view that the Committee and its two subcommittees continued to be the appropriate forums for discussing matters related to the peaceful uses of outer space, including the Moon and other celestial bodies, and that interaction, coordination and synergies between the Scientific and Technical Subcommittee and the Legal Subcommittee should be strengthened in order to align the development of space law with major scientific and technical advances in the space area and to promote understanding, acceptance and a real implementation of the existing United Nations legal instruments.

33. Some delegations expressed the view that the emergence of new space actors, the increase in privatization and commercialization of activities in outer space, the issue of cybersecurity and constant scientific and technological advances were creating conditions that had not been foreseen when the space treaties were negotiated. In that connection, the delegations expressing that view were also of the view that the Subcommittee should, jointly with the Scientific and Technical Subcommittee, address topical issues on the current space agenda, while ensuring that international space law kept up to date in order to achieve a balance between scientific progress and the benefits and interests of all countries, regardless of their level of development.

34. The view was expressed that, in view of the growing number of space objects and the diversification of space actors, space traffic management had become an issue of crucial importance for all nations and that, as a result of the increase in demand for space activities, the space environment had continued to become increasingly complex and congested. In that connection, the delegation expressing that view was also of the view that, in the interests of enduring sustainable and interference-free space operations, it would be necessary to identify viable solutions involving multilateral approaches (e.g., setting up an international legal framework for space traffic management) and the United Nations-based information-sharing mechanism, comprising a database on objects and events in space and relevant procedures for the operation of the mechanism.

35. The view was expressed that unauthorized launches and operations in space posed a fundamental threat to the existing space governance system and that States and the international community as a whole should therefore work to ensure that space activities would be conducted in accordance with international law.

36. Some delegations expressed the view that transparency and confidence-building measures continued to provide an important contribution to the security, safety and sustainability of activities in outer space, and that it would be important to promote principles of responsible behaviour in outer space in the framework of the United Nations and other appropriate multilateral forums. In that regard, the delegations expressing that view were also of the view that there would be value in negotiating, potentially within the framework of the United Nations, a non-legally binding instrument as a way of meeting those objectives.

37. Some delegations reaffirmed the commitment of their countries to the peaceful use and exploration of outer space and emphasized the following principles: universal and equal access to outer space for all countries without discrimination, regardless of their level of scientific, technical and economic development, and the equitable and rational use of outer space for the benefit of all humankind; the non-appropriation of outer space, including the Moon and other celestial bodies, by claim of sovereignty, use, occupation or any other means; responsibility of States for their national space activities carried out by both governmental and non-governmental entities; the non-militarization of outer space; the prevention of the installation of weapons of any kind in outer space; the strict use of outer space, as the common heritage of humankind, for peaceful purposes and for the improvement of living conditions and peace among the peoples that inhabit our planet; and international cooperation in the development of space activities, in particular those referred to in the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries.

38. Some delegations expressed the view that measures that would limit access to space for nations with emerging space capabilities should be avoided and that States should refrain from further developing the international legal framework in a manner that set overly high standards or thresholds that could hinder the enhancement of capacity-building for developing countries.

39. Some delegations reaffirmed the importance of preventing both an arms race in outer space and the placement of weapons of any kind in outer space, through the utilization of appropriate and effective verification mechanisms, and called upon all

States, in particular those with major space capabilities, to contribute actively to the peaceful use of outer space in order to prevent an arms race in space, and to refrain from placing weapons of any kind in outer space and from any other actions contrary to that objective.

40. Some delegations expressed the view that, over the years, the Committee and its subcommittees had excelled at delivering practical and useful guidance to the international community on the application of the legal principles enshrined in the core treaties on outer space. That guidance had taken the form of resolutions, frameworks, guidelines and a wealth of informative materials made available in print or online.

41. Some delegations expressed the view that the Subcommittee had a historic mission that needed to be underscored and valued, and that the Subcommittee should be granted new impetus, enriched with further debates, in order to be able to adequately fulfil its mandate as the negotiating body for international space law.

42. The view was expressed that the Legal Subcommittee was a unique international forum for the exchange of views and development of legal and policy foundations for activities of States in outer space. In that connection, the delegation expressing that view was also of the view that, in order to maximize its potential, the Subcommittee should intensify its consideration of topical problems of the legal regulation of modern space activities, and that it was an unacceptable and counterproductive practice for matters of exclusive competence of the Subcommittee, and which required the due consideration of the views of all States, to be considered within side forums with a limited set of participants.

43. The view was expressed that there should be greater coordination between the Committee and its subcommittees and the Conference on Disarmament, in particular with regard to the work of the Conference on the draft treaty on the prevention of the placement of weapons in outer space and of the threat or use of force against outer space objects. The delegation expressing that view was also of the view that that issue was inextricably linked with the long-term security and sustainability of outer space activities and therefore merited careful mutual consideration, and that the work of the Conference could be guided by the useful work done and knowledge accumulated by the Committee over previous years.

44. The view was expressed that an attempt to substitute the universal principle of freedom of access to outer space with a questionable principle of freedom of space activities was a matter of concern and that the regulation of space activities, similar to other human activities, should be based on the principle of supremacy of law and should take into account the interests of all States, while promoting international peace and security, the development of international cooperation and advancement in the level of trust among all participants in space activities.

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Draft report

IV. Status and application of the five United Nations treaties on outer space

1. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 6, entitled "Status and application of the five United Nations treaties on outer space", as a regular item on its agenda.

2. The representatives of Germany, Indonesia, Pakistan, Saudi Arabia, the Russian Federation and the United States made statements under agenda item 6. Statements were made by the representative of Ecuador on behalf of the Group of 77 and China, and by the representative of the Plurinational State of Bolivia on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

3. At its 957th meeting, on 9 April, the Subcommittee reconvened its Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, with Bernhard Schmidt-Tedd (Germany) as Chair.

4. At its [...]th meeting, on [...] April, the Subcommittee endorsed the report of the Chair of the Working Group, contained in annex I to the present report.

5. The Subcommittee had before it the following:

(a) Note by the Secretariat on UNISPACE+50 thematic priority 2, entitled "Legal regime of outer space and global governance: current and future perspectives", (A/AC.105/1169);

(b) Working paper submitted by Canada containing the draft resolution entitled "Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development" (A/AC.105/C.2/L.305);

(c) Conference room paper on the status of international agreements relating to activities in outer space as at 1 January 2018 (A/AC.105/C.2/2018/CRP.3);

(d) Responses to the set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Czechia (A/AC.105/C.2/2018/CRP.12);

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(e) Conference room paper submitted by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space containing a proposed outline of the key points for the guidance document under cluster 3 of UNISPACE+50 thematic priority 2, entitled "Legal regime of outer space and global space governance: current and future perspectives" (A/AC.105/C.2/2018/CRP.14);

(f) Responses to the set of questions provided by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space received from Indonesia (A/AC.105/C.2/2018/CRP.16).

6. The Subcommittee noted that, as at 1 January 2018, the status of the five United Nations treaties on outer space was as follows:

(a) The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, had 107 States parties and had been signed by 23 additional States;

(b) The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space had 96 States parties and had been signed by 23 additional States; two international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Agreement;

(c) The Convention on International Liability for Damage Caused by Space Objects had 95 States parties and had been signed by 19 additional States; three international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Convention;

(d) The Convention on Registration of Objects Launched into Outer Space had 67 States parties and had been signed by three additional States; three international intergovernmental organizations had declared their acceptance of the rights and obligations established under the Convention;

(e) The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies had 18 States parties and had been signed by four additional States.

7. The Subcommittee commended the Secretariat for updating, on an annual basis, the status of international agreements relating to activities in outer space; the current update had been made available to the Subcommittee in conference room paper A/AC.105/C.2/2018/CRP.3.

8. The Subcommittee expressed its appreciation to Canada for its efforts during the intersessional period to productively lead the informal meeting to draft the resolution entitled "Fiftieth anniversary of the first United Nations Conference on the Exploration and Peaceful Uses of Outer Space: space as a driver of sustainable development".

9. Some delegations expressed the view that the United Nations treaties on outer space formed the primary legal framework for creating a safe, secure and sustainable environment for the development of outer space activities and enhancing the effectiveness of the Legal Subcommittee as the main body for discussing and negotiating international space law. Those delegations welcomed with appreciation the growing number of parties to the United Nations treaties on outer space and encouraged those States that had not yet become parties to the treaties to consider doing so.

10. Some delegations expressed the view that, in the light of the growing number of space actors, including States and intergovernmental and non-governmental entities, efforts should be made to ensure that the conduct of space actors conformed with applicable international space law.

11. Some delegations expressed the view that promoting the universality of the United Nations treaties on outer space was essential to strengthening the work of the Committee and its subcommittees, and that the work of those bodies should be

complementary and closely coordinated to ensure their greater efficiency and effectiveness.

12. Some delegations expressed the view that the issuance of a guidance document by the Committee under UNISPACE+50 thematic priority 2 was welcome. It was also expressed that the Committee should provide an assessment of the status of the five United Nations treaties on outer space and present an analysis of the effectiveness of the legal regime governing outer space activities. The delegations expressing that view also expressed the view that a guidance document containing such an analysis could serve as a valuable resource for States wishing to become parties to the treaties.

13. The view was expressed that registration practices needed to be enhanced, in particular in the light of the continuing increase of space activities and the emergence of new actors in space, and that a corresponding strengthening of the capacity of the Office for Outer Space Affairs to fulfil its mandated tasks with respect to satellite registration was necessary.

14. The view was expressed that the questionnaire presented by the Chair of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space was a valuable tool for exchanging views on the current status of international space law. The view was further expressed that the answers provided by States members of the Committee played an important role in assessing the need to further develop the international framework for outer space activities.

XI. General exchange of views on the legal aspects of space traffic management

15. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 13, entitled "General exchange of views on the legal aspects of space traffic management" as a single issue/item for discussion.

16. The representatives of Austria, Germany, Indonesia, Japan, Pakistan, the Russian Federation and the United States made statements under agenda item 13. During the general exchange of views, statements relating to the item were made by representatives of other member States.

17. The Subcommittee noted that the space environment was becoming increasingly complex and congested, owing to the growing number of objects in outer space, the diversification of actors in outer space and the increase in space activities, and that the issue of space traffic management could be considered in that context.

18. The Subcommittee took note of a number of measures that were being undertaken at both the national and international levels to improve the safety and sustainability of spaceflight, including the exchange of information and services related to space situational awareness, international coordination efforts to manage radiofrequency and geostationary orbits, the reporting of annual launch plans and the submission of pre-launch notifications on space launch vehicles.

19. The Subcommittee took note with appreciation of "Space traffic management: towards a roadmap for implementation", published by the International Academy of Astronautics in 2018, which had been distributed to all delegations during the session.

20. The view was expressed that, in order to safeguard unimpeded access to and exploration of space, as well as the free use of space by all States without discrimination, the development of a comprehensive international space traffic management regime was needed. The same delegation was also of the view that it would, in line with the *Cosmic Study on Space Traffic Management* of the International Academy of Astronautics, interpret space traffic management as a set of technical and regulatory provisions for promoting safe access into outer space, secure operations in outer space and return from outer space to Earth, free from physical or radiofrequency interference.

21. The view was expressed that only an international approach to space traffic management would be able to properly address the underlying challenges of increased space activities and the emergence of new actors, and that an international space traffic management regime would provide orientation for national procedures to authorize and supervise the space activities of non-governmental entities.

22. The view was expressed that a comprehensive space traffic management system could enhance the safe and sustainable conduct of space activities and could include the following: improved information-sharing on space situational awareness; enhanced registration procedures; notification mechanisms for launches, in-orbit manoeuvres and re-entry of space objects; safety provisions; regulations with regard to space debris; and environmental provisions.

23. The view was expressed that developing rules, especially for on-orbit activities, was an urgent priority, as was establishing an integrated, harmonized and comprehensive space traffic management system for future space activities.

24. The view was expressed that the five United Nations treaties on outer space could, on a long-term basis, be complemented by further international agreements containing basic space traffic management rules, and that a second level of international administrative rules and regulations could comprise dynamic standards for the management of space traffic that would need to be easily amendable and would take into account ongoing technological developments.

25. The view was expressed that the prerequisites for a space traffic management regime did not exist, because a fairly high degree of uncertainty characterized the conceptualization of space traffic management, and no multidimensional understanding had yet been achieved. The view was also expressed that, as a result, there was no clear view of the factors that could facilitate the shaping of the concept of space traffic management.

26. The view was expressed that the agenda item on space traffic management had come before the Legal Subcommittee prior to any discussion having been held in the Scientific and Technical Subcommittee and that, as a result, in terms of analytical work on the topic, there was neither an understanding of the point of departure, nor an understanding of the destination.

27. The view was expressed that space situational awareness information and services were critical to avoiding collisions in outer space that could degrade the space environment for all spacefaring States. The view was also expressed that spaceflight safety was a global challenge and that safe and responsible behaviour in space should be continually encouraged.

28. The view was expressed that established space actors with the capacity for conjunction assessment should be encouraged to assist — through data-sharing, information-sharing, capacity-building and technical assistance — emerging spacefaring States that had not yet developed their own conjunction-assessment capacities.

29. The view was expressed that there should be a United Nations-based information-sharing mechanism, comprising a database on space objects and events, as well as their functions and operations.

30. The view was expressed that it was necessary to think about the model and order of the functioning of decision-making on the wide spectrum of space operations, which were to form the basis of space traffic management, and that many related ideas had been put forward in working papers to the Committee and its subcommittees.

31. The view was expressed that a space traffic regime was a prerequisite for a fault-based liability regime in outer space and the allocation of responsibilities.

32. The view was expressed that a system of space traffic management rules could facilitate the practical application of the fault-based liability regime set out in the United Nations treaties on outer space by defining a standard of care and due diligence

for activities in outer space against which the behaviour of space actors could be assessed to establish fault.

33. The view was expressed that the compendium of guidelines for the long-term sustainability of outer space activities represented a unique opportunity to address safety and security in outer space and that a positive correlation existed between the development of a full-fledged document on the long-term sustainability of outer space activities and productive discussions on the topic of space traffic management. The delegation expressing that view was also of the view that the seven guidelines for the long-term sustainability of outer space activities on which consensus had not yet been reached dealt with the most important aspects of safety and security in outer space.

34. The view was expressed that, with the pending adoption of the guidelines for the long-term sustainability of outer space activities, the topics on which consensus could not be reached but which were nevertheless important for the sustainability, safety and security of outer space activities could be addressed in further negotiations for the benefit of an international space traffic management regime.

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V. Matters relating to the definition and delimitation of outer space and the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union

1. Pursuant to General Assembly resolution 72/77, the Subcommittee considered, as a regular item on its agenda, agenda item 7, entitled:

"Matters relating to:

"(a) The definition and delimitation of outer space;

"(b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union."

2. The representatives of Canada, Ecuador, Indonesia, Mexico, Pakistan, the Russian Federation, South Africa and the United States made statements under agenda item 7. Statements were also made by the representative of Ecuador on behalf of the Group of 77 and China and the representative of the Plurinational State of Bolivia on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were made by representatives of other member States.

3. At its 957th meeting, on 9 April 2018, the Legal Subcommittee reconvened its Working Group on the Definition and Delimitation of Outer Space, with José Monserrat Filho (Brazil) as Chair. Pursuant to the agreement reached by the Subcommittee at its thirty-ninth session and endorsed by the Committee at its forty-third session, both held in 2000, and pursuant to General Assembly resolution 72/77, the Working Group was convened to consider only matters relating to the definition and delimitation of outer space.

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4. The Working Group held [...] meetings. The Subcommittee, at its [...] meeting, on [...] April, endorsed the report of the Chair of the Working Group, contained in annex [...] to the present report.

5. For its consideration of the item, the Subcommittee had before it the following:

(a) Note by the Secretariat on national legislation and practice relating to the definition and delimitation of outer space (A/AC.105/865/Add.20 and A/AC.105/865/Add.21);

(b) Note by the Secretariat on questions on suborbital flights for scientific missions and/or for human transportation (A/AC.105/1039/Add.10 and A/AC.105/1039/Add.11);

(c) Note by the Secretariat entitled "Definition and delimitation of outer space: views of States members and permanent observers of the Committee" (A/AC.105/1112/Add.4 and A/AC.105/1112/Add.5);

(d) Working paper prepared by the Chair of the Working Group on the Definition and Delimitation of Outer Space of the Legal Subcommittee entitled "Promoting the discussion of the matters relating to the definition and delimitation of outer space with a view to elaborating a common position of States members of the Committee on the Peaceful Uses of Outer Space" (A/AC.105/C.2/L.302);

(e) Working paper submitted by the Russian Federation entitled "The challenging context of considering all aspects of the delimitation of airspace and outer space: arguments for adding dialectical elements to, and setting new analytical trends in, discussion of the issue" (A/AC.105/C.2/L.306);

(f) Conference room paper submitted by the Space Safety Law and Regulation Committee of the International Association for the Advancement of Space Safety entitled "Suborbital flights and the delimitation of airspace vis-à-vis outer space: functionalism, spatialism and State sovereignty" (A/AC.105/C.2/2018/CRP.9).

6. The Subcommittee noted with satisfaction the report on the series of aerospace symposiums organized by ICAO and the Office for Outer Space Affairs from 2015 to 2017 (A/AC.105/1155), which was before the Subcommittee. The Subcommittee noted that the main objectives of the symposiums had been to bring together representatives of the aviation and space communities, including the commercial and private sectors, and to explore existing regulatory mechanisms and operational practices in the fields of aviation and space transportation. The Subcommittee also noted that efforts had been made to make use of the symposiums to facilitate the strengthening of a dialogue between the aviation and space communities, and that the Office for Outer Space Affairs and ICAO would continue their cooperation, including through the Space Learning Group.

7. Some delegations expressed the view that the definition and delimitation of outer space would make it possible to ensure the practical application of the principle of freedom of exploration and use of outer space for peaceful purposes on the basis of non-discrimination and equality between States. In addition, it would help to define precisely whether an object was a space object, in view of technological progress and the development of vehicles for use in space tourism and commercial suborbital flights; it would make it possible to demarcate clearly the sphere of influence of States and private actors, in view of the rapid growth of the commercial space sector; and it would also make it possible to define in clear terms the spatial scope of application of international treaties concerning activities in airspace and outer space, which would prevent future claims by States to outer space or any part thereof.

8. The view was expressed that the definition and delimitation of outer space would be beneficial to States and valuable in safeguarding the proper governance of space activities at the international, regional and national levels. It would also enable the effective application of the fundamental principles of the United Nations treaties on outer space; assist in providing clarity and certainty and reduce inconsistencies in the practice of States pertaining to activities conducted in airspace and outer space,

including suborbital flights for scientific missions or human transportation; and facilitate compliance with and response to matters related to the sovereignty and liability of States.

9. Some delegations expressed the view that the lack of a definition or delimitation of outer space created legal uncertainty at both the national and international levels concerning the applicability of air law and space law.

10. The view was expressed that the issue of definition and delimitation of outer space was closely linked to matters of safety and security.

11. The view was expressed that, in the absence of a clear definition and delimitation of outer space and airspace, it was impossible to define an area of applicable law and to consistently enforce laws, rules and regulations.

12. The view was expressed that the issues relating to the definition and delimitation of outer space should be addressed in order to ensure the safety of aerospace operations without prejudice to national security and State sovereignty.

13. The view was expressed that the rationale for the delimitation of outer space and airspace at the level between 100 and 110 km above sea level would be based on comprehensive aspects, including scientific, technical and physical characteristics, namely the atmospheric layers, aircraft altitude capacity, the perigee of the spacecraft and the Kármán line.

14. The view was expressed that many States, in their existing national frameworks, had developed different mechanisms and approaches to distinguish outer space and airspace activities with a view to fulfilling their obligations under international treaties, and that those mechanisms should serve as an underlying foundation for guidance and rationale in continuing to look for an adequate solution to assist the Subcommittee in attaining a coherent resolution to the problem.

15. The view was expressed that the establishment of the definition and delimitation of outer space in national laws did not warrant it in international space law.

16. The view was expressed that, in order to resolve the problems relating to the definition and delimitation of outer space, a multilateral legal solution should be applied, which should be a result of an open and inclusive consultation mechanism among States to address the key issues, including an international framework for the registration, authorization and licensing of passage rights for commercial space activities during launch into and re-entry from orbit, keeping in mind that such activities raised legal questions relating to national security, State sovereignty, the safety of the local population and the protection of the environment.

17. The view was expressed that the definition and delimitation of outer space should be based on a functional approach, instead of criteria including altitude or the location of an object, because space law would apply to any activity aimed at putting a space object into Earth orbit or beyond in outer space. The delegation expressing that view was also of the view that altitude should not be a factor for determining whether an activity was an outer space activity; rather, the classification of the activity should be determined a priori according to the function of the space object and the purpose of the activity. Therefore, it would be appropriate that the legal framework applied to a suborbital flight be determined not by the flight altitude but by the characteristics of the activity and the legal issues arising from it.

18. The view was expressed that the main problem in the elaboration of the term "outer space" was in the establishment of a certain conditional border, which would define those legal regimes that would be applicable to the areas around it. In that connection, neither of the existing approaches, whether spatial or functional, would be able to resolve, on its own and in full, the regulation of existing and prospective models of flights as related to: (a) the principle of indivisibility and non-appropriation of outer space; and (b) the protection of national interests and sovereignty of States. The delegation expressing that view was also of the view that the question of the delimitation of outer space was linked to the problem of the existence of certain gaps

in international space law, which were related to the preservation of outer space for peaceful purposes, the prevention of an arms race in outer space and the non-use of force. Therefore, in view of a complex geopolitical situation and the absence of effective international agreements and guarantees in that field, the issue of delimitation appeared in the dimension of legal certainty regarding the protection of sovereignty and security of States. As a result, the establishment of any kind of strata between airspace and outer space should be avoided.

19. Some delegations expressed the view that States should continue to operate in the current framework, which functioned well, until such time as there was a demonstrated need and a practical basis for developing a definition or delimitation of outer space. The delegations expressing that view were also of the view that the current framework had presented no practical difficulties and that, therefore, at present, any attempt to define and delimit outer space would be a theoretical exercise that could unintentionally complicate existing activities and might not be adaptable to future technological developments.

20. Some delegations expressed the view that there was no evidence to suggest that the lack of a definition or delimitation of outer space had hindered or restricted the growth of aviation or outer space exploration, and that no specific cases of a practical nature had been reported to the Subcommittee that could confirm that the lack of a definition of airspace or outer space had compromised aviation safety.

21. Some delegations expressed the view that progress in the matters relating to the definition and delimitation of outer space could be achieved though consultations with ICAO.

22. Some delegations expressed the view that the existence of different regimes and mutually exclusive concepts, such as territorial sovereignty and the common heritage of humanity, revealed a substantial basis for the Subcommittee to keep the item on its agenda for future sessions.

23. Some delegations expressed the view that the geostationary orbit — a limited natural resource clearly in danger of saturation — needed to be used rationally and should be made available to all States, irrespective of their current technical capacities. That would provide States with the possibility of gaining access to the geostationary orbit under equitable conditions, bearing in mind, in particular, the needs and interests of developing countries and the geographical position of certain countries, and taking into account the processes of ITU and relevant norms and decisions of the United Nations.

24. Some delegations expressed the view that the geostationary orbit, as a limited natural resource clearly in danger of saturation, must be used rationally, efficiently, economically and equitably. That principle was deemed fundamental for safeguarding the interests of developing countries and countries in certain geographical positions, as set out in article 44, paragraph 196.2, of the ITU Constitution, as amended by the plenipotentiary conference held in 1998.

25. The view was expressed that the legal regime for outer space was different from the legal regime for airspace, which was guided by the principle of sovereignty; the geostationary orbit was therefore an integral part of outer space and was not subject to national appropriation by claim of sovereignty, by means of use or occupation or by any other means, including by means of use or repeated use.

26. The view was expressed that the current regime for the exploitation and utilization of the geostationary orbit provided opportunities mostly for countries with greater financial and technical capabilities and, in that connection, there was a need to take anticipatory measures to address the potential dominance of such countries in the utilization of space in order to address the needs of developing countries and of countries in particular geographical areas, such as those in equatorial regions.

27. Some delegations expressed the view that the utilization by States of the geostationary orbit on a "first come, first served" basis was unacceptable and that the

Subcommittee should therefore develop a legal regime guaranteeing equitable access to orbital positions for States in accordance with the principles of the peaceful use and non-appropriation of outer space.

28. The view was expressed that the problems relating to the utilization of the geostationary orbit included limited frequencies and the amount of coordination needed with the affected satellite networks, especially in adjacent positions, which made it difficult for newcomers to gain access to that orbit spectrum resource. The delegation expressing that view was also of the view that those problems revealed inequalities, inefficiencies and bureaucratic congestion in the utilization of the geostationary orbit, which had become a disadvantage in terms of securing access for all countries, including developing countries, countries in particular geographical areas, equatorial countries and emerging space actors.

29. The view was expressed that the planned band (AP30/30A/30B) regime developed by ITU, which would guarantee equitable access for States to orbital positions, had certain technological limitations that made it difficult to realize, and that the current utilization of that natural resource in unplanned band on a "first-come, first-served" basis had made that natural resource unattainable for countries that did not have the technology.

30. The view was expressed that there was a need for a comprehensive legal principle on the elaboration of a sui generis regime governing the utilization of the geostationary orbit, which would be aimed at achieving the following objectives: (a) ensuring equitable access for all countries, in particular developing countries, countries in particular geographical areas and emerging space actors; (b) ensuring fair and orderly utilization; (c) guaranteeing sustainable utilization; (d) protecting the rights of legitimate users; (e) ensuring rational and efficient use; (f) improving regulations on procedures of access; (g) preventing the abuse of registration procedures and acquired rights; and (h) preventing harmful interference among users.

31. Some delegations expressed the view that, in order to ensure the sustainability of the geostationary orbit and to assure guaranteed and equitable access to it according to the needs of all nations, particularly emerging spacefaring countries, it was necessary to keep the issue on the agenda of the Subcommittee and to explore it further through the creation of appropriate working groups and legal and technical intergovernmental panels, as necessary.

XII. General exchange of views on the application of international law to small satellite activities

32. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 14, entitled "General exchange of views on the application of international law to small satellite activities", as a single issue/item for discussion on its agenda.

33. The representatives of Austria, France, Germany, Indonesia, Iran (Islamic Republic of), Japan, Mexico, Pakistan, the Republic of Korea, South Africa, the United Arab Emirates, the United Kingdom and the United States made statements under agenda item 14. The representative of Ecuador also made a statement on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the item were made by representatives of other member States.

34. The Subcommittee agreed that the continuation of its work under the item would provide valuable opportunities for addressing a number of topical issues relating to international and national policy and regulation measures regarding the use of small satellites by various actors.

35. The Subcommittee took note with appreciation of the questionnaire on the application of international law to small-satellite activities (contained

in A/AC.105/1122, annex I, appendix II), considered by the Working Group on the Status and Application of the Five United Nations Treaties of Outer Space. The Subcommittee noted that both the questionnaire and the replies received from member States and observers, which were contained in two conference room papers (A/AC.105/C.2/2018/CRP.10 and A/AC.105/C.2/2018/CRP.17), enhanced the discussion of the legal issues raised with regard to small-satellite activities at the international level.

36. The Subcommittee reaffirmed that small satellites had become important instruments that enabled many developing States, their governmental and non-governmental organizations, including universities, education and research institutes, and private industries with limited funds, to join in the exploration and the peaceful uses of outer space and to become developers of space technology.

37. The Subcommittee recognized that technological progress had made the development, launch and operation of small satellites increasingly affordable and that such satellites could provide substantial assistance in various areas, including education, telecommunications, Earth observation and disaster mitigation. Such satellites could also be used to test and demonstrate new technologies, thus playing an important role in fostering technological progress in the area of space activities.

38. The Subcommittee noted with appreciation the programmes of the Office for Outer Space Affairs, including the Basic Space Technology Initiative — which promoted capacity-building in space technology development and international and national space law related to small-satellite activities — and the United Nations/Japan Cooperation Programme on CubeSat Deployment from the International Space Station Japanese Experiment Module (Kibo), known as "KiboCUBE", which provided opportunities to educational and research institutions in developing countries that were States members of the Committee.

39. The Subcommittee reiterated that the guidance on space object registration and frequency management for small and very small satellites, which had been jointly developed by the Office for Outer Space Affairs and ITU, served as a useful guide for developers and operators of small satellites.

40. The Subcommittee was informed about existing and emerging practices and regulatory frameworks applicable to the development and use of small satellites, and about the programmes of States and international organizations in that field.

41. The Subcommittee noted that the activities of small satellites, regardless of their size, should be carried out in compliance with existing international regulatory frameworks, including the United Nations treaties and principles on outer space, the ITU Constitution and Convention and the ITU Radio Regulations, and certain non-binding instruments, including the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, in order to guarantee the safety and sustainability of outer space activities.

42. Some delegations expressed the view that the evolving nature of space technologies and the growing number of space actors required clarity in the application of existing space law and administration procedures, in order to address the opportunities and challenges of small-satellite activities.

43. The view was expressed that the relevant international standards needed to be adjusted and that, to that end, the revised "Inter-Agency Space Debris Coordination Committee statement on large constellations of satellites in low earth orbit" of the Inter-Agency Space Debris Coordination Committee was welcome.

44. The view was expressed that the discussions on the application of international law to small- satellite activities should also focus on the definition of "small satellite".

45. Some delegations expressed the view that the elaboration of provisions for small satellites, including the possibility of an ad hoc legal regime, could be considered. Such provisions could address the operations of small satellites, including the

consideration of ways and means of ensuring the rational and equitable use of the low Earth orbit and frequency spectrum.

46. Some delegations expressed the view that the existing legal regime on outer space provided safety, transparency and sustainability of operations involving small-satellite activities and that an ad hoc legal regime or any other mechanisms that could impose limitations on the design, building, launch or use of space objects should not be created.

47. The view was expressed that there were potential risks of physical accidents and frequency interference owing to the increasing concentration of small satellites.

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III. Information on the activities of international intergovernmental and non-governmental organizations relating to space law

1. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 5, entitled "Information on the activities of international intergovernmental and non-governmental organizations relating to space law", as a regular item on its agenda.

2. The representative of Pakistan made a statement under agenda item 5. Statements were also made under the item by the observers for ECSL, the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, IISL, ILA and Intersputnik. During the general exchange of views, statements relating to the item were made by observers of other international intergovernmental and non-governmental organizations.

3. For its consideration of the item, the Subcommittee had before it the following:

(a) Note by the Secretariat containing information on activities relating to space law received from the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation, ILA and Intersputnik (A/AC.105/C.2/113);

(b) Conference room paper containing information on activities relating to space law received from IISL (A/AC.105/C.2/2018/CRP.13).

4. The Subcommittee heard a presentation entitled "SGAC: views and activities of the Space Law and Policy Project Group", by the observer for SGAC.

5. The Subcommittee noted with satisfaction that the activities of international intergovernmental and non-governmental organizations relating to space law had continued to contribute significantly to the study, clarification and development of space law and that those organizations had continued to organize conferences and symposiums, prepare publications and reports and organize training seminars for practitioners and students to broaden and advance knowledge of space law.

6. The Subcommittee noted that international intergovernmental organizations had an important role to play in the development, strengthening and furtherance of understanding of international space law.

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7. The Subcommittee welcomed the information provided by the observer for APSCO, including information on the APSCO training course entitled "Space Law and Policy", held in Harbin, China, from 4 to 8 July 2017; the fourth APSCO Space Law and Policy Forum, also held in Harbin, China, from 10 to 12 July 2017; the tenth anniversary high-level forum celebrating 10 years since the establishment of APSCO, to be held in Beijing from 14 to 16 November 2018; and the APSCO ninth international symposium, also to be held in Beijing in November 2018.

8. The Subcommittee welcomed the information provided by the observer for ECSL, including information on the European rounds of the Manfred Lachs Moot Court, held in Helsinki from 10 to 12 May 2017; the twenty-sixth edition of the ECSL Summer Course on Space Law and Policy, held in Rome from 4 to 15 September 2017; and the ECSL Executive Course on Space Law and Regulations, tailor-made for industry professionals, to be held at the ESA European Space Research and Technology Centre in Noordwijk, the Netherlands, from 6 to 8 June 2018.

9. The Subcommittee welcomed the information provided by the observer for ESA, including information on ESA involvement in bodies such as the Inter-Agency Space Debris Coordination Committee and the Space Mission Planning Advisory Group; the contributions of ESA to the UNISPACE+50 process; and advice and assistance provided by ESA to its member States in the establishment and implementation of national space legislation.

10. The Subcommittee welcomed the information provided by the Ibero-American Institute of Aeronautic and Space Law and Commercial Aviation (see A/AC.105/C.2/113), including information on celebrations for its forty-fourth conference, held in Santiago from 25 to 28 September 2017; participation in "Science Week", held in Cadiz, Spain, in November 2017; and the fifth Seminar on Space Activities and Law, held at the Institute's headquarters in Madrid on 27 November 2017.

11. The Subcommittee welcomed the information provided by the observer for IISL (see A/AC.105/C.2/2018/CRP.13), including information on the sixtieth IISL Colloquium, held in Adelaide, Australia, from 25 to 29 September 2017; the twenty-seventh World Final Manfred Lachs Space Law Moot Court Competition, also held in Adelaide in September 2017, and the twenty-eighth session of the same competition, to be held in Bremen, Germany, in 2019; the twelfth Eilene M. Galloway Symposium on Critical Issues in Space Law, held in Washington, D.C., on 13 December 2017; and the new IISL website (http://iislweb.org).

12. The Subcommittee welcomed the information provided by ILA on its activities relating to space law (see A/AC.105/C.2/113), including information on the four central topics and two specific questions of the ILA Space Law Committee report; ILA participation in the Action Team on Exploration and Innovation; and the forthcoming seventy-eighth conference of ILA, to be held in Sydney, Australia, in August 2018.

13. The Subcommittee welcomed the information provided by Intersputnik (see A/AC.105/C.2/113), including information on its participation in the fifteenth Blischenko Congress, convened by the Peoples' Friendship University of Russia, held in Moscow on 22 April 2017; the special May 2017 issue of the Russian scientific and technical journal *Electrosvyaz* that was dedicated to international space law; a seminar on the development of national satellite telecommunications named NATSATTEL, held in June 2017; and a round-table discussion at the Institute of Legislation and Comparative Law devoted to the sixtieth anniversary of the launch of Sputnik, held in December 2017.

14. The Subcommittee welcomed the information provided by the observer for the National Space Society, including information on the publication of *Ad Astra*, a quarterly magazine chronicling important developments in space; and the annual International Space Development Conference, which is to be held in Los Angeles, United States, from 25 to 29 May 2018.

15. The Subcommittee welcomed the information provided by the observer for the Regional Centre for Remote Sensing of the North African States (CRTEAN), including information on work undertaken to develop a model regional law for space that could be used by States as guidance when creating their own domestic laws, and information on the second International Conference and Exhibition: Advanced Geospatial Science and Technology (TeanGEO 2018), to be held in Tunis from 26 to 28 September 2018.

16. The Subcommittee welcomed the information provided by the observer for SGAC, including information on the sixteenth Space Generation Congress, held in Adelaide, Australia, in September 2017; the third SGAC technology-focused event, SGx, held in Washington, D.C., on 12 March 2018; the third European Space Generation Workshop, held in Bucharest on 9 and 10 March 2018; and the seventh annual Space Generation Fusion Forum, held in conjunction with the thirty-fourth Space Symposium, in Colorado Springs, United States, from 16 to 19 April 2018.

17. The Subcommittee welcomed the information provided by the observer for SWF, including information on the fifth annual Advanced Maui Optical and Space Surveillance Dialogue, held in Maui, United States, in September 2017; a one-day event on space insurance aimed at fostering a discussion on the role and importance of the insurance industry in incentivizing responsible behaviour and best practices among satellite operators, held in Washington, D.C., in January 2018; and the ongoing work of SWF with the Hague Space Resources Governance Working Group.

18. The Subcommittee agreed that it was important to continue the exchange of information on recent developments in the area of space law between the Subcommittee and international intergovernmental and non-governmental organizations and that such organizations should once again be invited to report to the Subcommittee, at its fifty-eighth session, on their activities relating to space law.

XIII. General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources

19. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 15, entitled "General exchange of views on potential legal models for activities in exploration, exploitation and utilization of space resources", as a single issue/item for discussion.

20. The representatives of Austria, Belgium, Brazil, Canada, France, Germany, Greece, Indonesia, Japan, Luxembourg, Mexico, the Netherlands, Pakistan, the Russian Federation, the United Arab Emirates and the United States made statements. Statements were also made by the representative of Nigeria on behalf of the Group of 77 and China and the representative of Argentina on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

21. The Subcommittee had before it the following:

(a) Conference room paper containing a working paper prepared by Belgium on questions and observations on the establishment of national legal frameworks for the exploitation of space resources (A/AC.105/C.2/2018/CRP.8);

(b) Conference room paper containing information provided by the Netherlands, entitled "The Hague Space Resources Governance Working Group" (A/AC.105/C.2/2018/CRP.18).

22. The Subcommittee noted that the Hague Space Resources Governance Working Group, established to assess the need for a regulatory framework for space resource activities, had held four in-person meetings: two in 2016 and two in 2017. In that regard, the Subcommittee noted that the Working Group had identified 19 "building blocks", which were the topic areas that such a regulatory framework could include.

Those building blocks would be open for comment until July 2018, after which the Working Group would continue to operate for two years in order to enable inclusive consultations on the building blocks.

23. The view was expressed that the discussions on space resources in the Hague Space Resource Governance Working Group had been conducted in an open, inclusive and transparent manner, with the intention of producing a document containing building blocks that could contribute to the regulation of space resources for the consideration of States and the international community. The delegation expressing that view also expressed the view that, if States so decided, the work of the Group could be a starting point for negotiations on an international framework.

24. The view was expressed that, in the absence of a mandate from States for a formal mechanism to ensure their representation, initiatives that provided a forum for negotiations on an international framework should not be acknowledged. Despite being potentially valuable, such work would be undertaken in a manner that would create confusion and interfere with the work of the Committee.

25. Some delegations expressed the view that a clear understanding gained through a wide-ranging debate on international legal obligations under the United Nations treaties on outer space was necessary, in order to avoid gaps and ensure the consistency of national legislation on the utilization of space resources.

26. The view was expressed that, in accordance with the title of the agenda item, the Subcommittee should consider discussing the existing legal model for activities in the exploration, exploitation and utilization of space resources, namely the international legal regime applicable to States as laid out in the Outer Space Treaty and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, and that a common understanding of the provisions contained in those instruments would assist States in the development of their national legislation on the subject.

27. Some delegations expressed the view that the Outer Space Treaty guaranteed the freedom of exploration and use of outer space and, in that regard, did not prohibit the utilization and exploitation of resources contained in celestial bodies.

28. Some delegations expressed the view that taking a broad multilateral approach to space resources within the Committee and its Legal Subcommittee was the only way to ensure that the concerns of all States would be taken into account, thereby promoting peace and security among nations.

29. The view was expressed that space resources were accessible to only a very limited number of States and to a handful of enterprises within those States. In that connection, the delegation expressing that view was also of the view that it would be important to assess the impact of a "first-come, first-served" doctrine on the global economy, which could create a de facto monopoly in complete contradiction to the letter and the spirit of the United Nations treaties and resolutions.

30. Some delegations expressed the view that the conditions under which both public and private operators could conduct resource utilization activities needed to be studied and agreed multilaterally, in order to appropriately address relevant issues, including the regulation of access to resources, the co-existence of activities on the same celestial body, the prevention of multiple new potential risks to both the terrestrial and space environments and the modalities of supervision by States.

31. The view was expressed that even if non-renewable resources from a celestial body could be subjected to an ownership regime, the manner in which the principles enshrined in the Outer Space Treaty were to be adhered to would still need to be determined. Specific areas of concern included ensuring that: (a) space resource activities would be carried out for the benefit and interest of all countries on a non-discriminatory basis; (b) free access to all areas of the celestial body would be maintained; (c) space resource extraction would not amount to national appropriation

by any means; and (d) facilities and stations would remain open to representatives of other States on the basis of reciprocity.

32. The view was expressed that the Subcommittee should undertake detailed discussions on the exploitation and utilization of space resources by private entities, specifically addressing the following concerns: whether the legal status of a celestial body was the same as the legal status of the resources on it; whether the exploitation and utilization of space resources by a private entity could be for the benefit of all humankind; whether a claim of ownership of space resources by a private entity violated the principle of non-appropriation in the Outer Space Treaty; and how an international mechanism for the coordination and sharing of space resources could be built.

33. The view was expressed that a multilateral approach to addressing the issues arising from space resource activities was essential, in order to ensure that the principles of the Outer Space Treaty were respected and upheld.

34. Some delegations expressed the view that, in the light of the increasing participation of the private sector in space activities, an international legal framework that was developed in a multilateral forum and that clearly defined and guided commercial activities in outer space could play an important role in expanding the use of outer space and stimulating space activities, and that such a framework was essential as a means of providing legal certainty.

35. The view was expressed that, in the context of space resource utilization activities, only a few contributions of States to the discussion had to do with the need to establish an international regime to regulate such activities. The delegation expressing that view also expressed the view that the discussion on space resource exploitation at the international level had only succeeded in reducing key issues, concerning the legality and finality of those activities, to mere matters of interpretation of a small number of international legal provisions, and that, furthermore, focusing on such a nuanced interpretation had the apparent aim of resolving broad legal implications of one of the most dramatic evolutions in modern spacefaring, so as to be determined by the subsequent practice of only a handful of States.

36. The view was expressed that there was a lack of uniform understanding with regard to two principles: firstly, that the exploration and use of outer space was the province of all humankind, as set out in the Outer Space Treaty, and secondly, that the Moon and its natural resources were the common heritage of humankind, as set out in the Moon Agreement. The delegation that expressed that view was also of the view that those concepts required thorough discussion in the Legal Subcommittee in order to ensure their uniform interpretation.

37. The view was expressed that, while proclaiming the universal principles of free access to outer space, and freedom and equality in the study and exploration of outer space, the Outer Space Treaty contained no provisions guaranteeing freedom of action for States, thereby calling into question the stated basis of many national laws on space resource exploitation and utilization.

38. Some delegations expressed the view that the international community of States had jurisdiction over space resources, as well as the right and duty to develop an appropriate international legal framework for such activities. Owing to its unique expertise, as well as its forum for discussions, the Legal Subcommittee was the natural and logical place to engage in the progressive development of international space law with due regard to the interests and opinions of all countries.

39. The view was expressed that the work undertaken in the Hague Space Resources Governance Working Group was troubling for a number of reasons, including the following: fundamental principles of interest to all States had been discussed by a limited group of individuals; the Group had made assumptions about the interpretation of international space treaties; and the output of the Group, namely its study, contained language that was strikingly similar to recent provisions of national

laws on space resources, while at the same time lacking the practical considerations contained in the work of the Scientific and Technical Subcommittee (e.g., references to the long-term sustainability of outer space activities).

40. The view was expressed that the development of a regulatory regime on the exploitation of space resources was a right of the international community as a whole, and that, in that context, it was necessary for the international community to define the legal framework and arrive at terms and conditions of commercial extraction on the basis of international consensus in order to ensure the validity and application of international law to such activity, thereby creating the legal certainty essential for stimulating private investment and research into innovative space activities.

41. Some delegations expressed the view that the freedom of exploration, use and exploitation of outer space was not absolute, but instead was fundamentally restricted by the principles contained in the Outer Space Treaty, in particular as related to non-discrimination of any kind, equality between States and observance of international law.

42. Some delegations expressed the view that any national legislation on space resources should proclaim, as its guiding principle, that the use and exploration of outer space and the utilization of space resources were of paramount interest to humanity, and that space resource activities should be carried out in a sustainable manner and exclusively for the benefit of all countries, regardless of their levels of economic and scientific development. The delegations expressing that view also expressed the view that clauses in existing national legislation that contained general terms of conformity with the international obligations of the State in question were not sufficient to guarantee compliance with the stated treaty principles.

43. Some delegations expressed the view that the Committee on the Peaceful Uses of Outer Space should analyse the text of the United Nations treaties on outer space to reach a common understanding of the guiding principles. On the basis of that analysis, it should develop model legislative clauses that could be inserted into national legislation and that reproduced, in a precise and explicit manner, the principles mentioned in the international treaties, and it should establish an effective institutional mechanism to control the enforcement of those model terms.

44. Some delegations expressed the view that the discussions in the Hague Space Resources Governance Working Group were welcome in that the topics and issues under consideration, such as the 19 building blocks, could form a useful starting point to undertaking discussions in the Legal Subcommittee.

45. The view was expressed that because all countries would stand to benefit from the progress made in space resource utilization, the primary interest of ensuring humanity as a whole would benefit would also be achieved; however, in order to do that, care should be taken to provide the proper legal framework in order to allow actors to develop their projects on a solid foundation.

46. The view was expressed that the regulation of private sector actors in outer space was consistent with international obligations under the Outer Space Treaty and with half a century of practice under the Treaty, and the consistently stated positions of some States.

47. The view was expressed that utilization of space resources was a lawful activity under the Outer Space Treaty, and that evidence of that lawfulness was demonstrated by the Moon Agreement itself. The delegation expressing that view also expressed the view that because the Moon Agreement contained the same prohibition against national appropriation that was found in the Outer Space Treaty, and also contained a discussion of how resources should be regulated, it demonstrated that the negotiators and drafters of the Moon Agreement believed the utilization of space resources was permitted by the Outer Space Treaty and was specifically consistent with the non-appropriation doctrine.

48. The view was expressed that, in order to facilitate discussion on space resource utilization activities, the term "exploitation activities" could be defined as any activity in outer space, including on celestial bodies, with the purpose of extracting mineral resources from those bodies in order to transfer them, before or after processing transformations, to Earth, with the intent to use them for governmental or commercial activities.

49. The view was expressed that definitions regarding space resource utilization activities that specified the governmental or non-governmental nature of actors undertaking such activities, and the consequent purposes for which the resources would be used, including whether the resources were to be used in situ or transported to Earth, were not applicable to the determination of the lawfulness of that space resource activity because such distinctions were not found in the Outer Space Treaty.

50. Some delegations expressed the view that questions under the present agenda item, relating to space resources, could be included in the set of questions before the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space (see A/AC.105/1122, annex I, appendix I).

51. Some delegations expressed the view that an ad hoc working group should be established with the mandate to develop and propose to the Legal Subcommittee alternative legal solutions capable of providing the legal certainty necessary for acts of exploration, exploitation and utilization of outer space resources.

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VI. National legislation relevant to the peaceful exploration and use of outer space

1. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 8, entitled "National legislation relevant to the peaceful exploration and use of outer space", as a regular item on its agenda.

2. The representatives of Australia, Brazil, Greece, Indonesia, Japan, Mexico, Pakistan, Saudi Arabia and the United Arab Emirates made statements under agenda item 8. During the general exchange of views, statements relating to the item were made by the representatives of other member States.

3. The Subcommittee heard the following presentations:

(a) "The United Kingdom Space Industry Bill", by the representative of the United Kingdom;

(b) "Satellite servicing and private sector habitats: a review of United States laws and regulations surrounding non-traditional commercial space activities", by the representative of the United States.

4. The Subcommittee reiterated that it was important to take into account the increased level of commercial and private activities in outer space. To that end, States needed to ensure that those activities were in compliance with the United Nations treaties on outer space and should establish national legal frameworks in order to ensure the safety and security of their activities.

5. The Subcommittee noted that the development and reformation of national space policies, and their implementation through national space regulations, was increasingly aimed at addressing issues raised by the rising number of non-governmental entities conducting space activities.

6. The Subcommittee noted various activities of member States to review, strengthen, develop or draft national space laws and policies, as well as reform or establish the governance of national space activities. In that connection, the Subcommittee also noted that those activities were aimed at the improvement of the management and regulation of space activities; the reorganization of national space agencies; an increase in competitiveness of governmental and non-governmental organizations in their space activities; greater involvement of academia in policy

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formulation; better responses to challenges posed by the development of space activities, in particular those relating to the management of the space environment; and better implementation of international obligations.

7. The Subcommittee agreed that the discussions under agenda item 8 were important and that they enabled States to gain an understanding of existing national regulatory frameworks, share experiences on national practices and exchange information on national legal frameworks.

8. The Subcommittee agreed that it was important to continue to regularly exchange information on developments in the area of national space-related regulatory frameworks. In that regard, the Subcommittee encouraged member States to continue to submit to the Secretariat texts of their national space laws and regulations and to provide updates and inputs for the schematic overview of national regulatory frameworks for space activities.

VII. Capacity-building in space law

9. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 9, entitled "Capacity-building in space law", as a regular item on its agenda.

10. The representatives of Chile, China, France, Germany, Indonesia, Japan, Mexico, Pakistan, the Russian Federation, South Africa, Ukraine, the United Arab Emirates and the United States made statements under agenda item 9. The representative of Argentina made a statement on behalf of the Group of Latin American and Caribbean States, and the representative of Nigeria made a statement on behalf of the Group of 77 and China. The observer for CRTEAN also made a statement under the item. During the general exchange of views, further statements relating to the item were made by representatives of other member States.

11. The Subcommittee had before it the following:

(a) Conference room paper containing a directory of educational opportunities in space law (A/AC.105/C.2/2018/CRP.11);

(b) Conference room paper containing information submitted by Japan on its actions and initiatives to build capacity in space law (A/AC.105/C.2/2018/CRP.15).

12. The Subcommittee agreed that capacity-building, training and education in space law were of paramount importance to national, regional and international efforts to further develop the practical aspects of space science and technology, especially in developing countries, and to increasing knowledge of the legal framework within which space activities were carried out, which would encourage States to ratify the five United Nations treaties on outer space and support the implementation of those treaties and the establishment of national institutions. It was emphasized that the Subcommittee and the Office for Outer Space Affairs had an important role to play in that regard.

13. The Subcommittee agreed that capacity-building played a major role in the UNISPACE+50 process, and could be an opportunity to consider space programmes in terms of capacity-building and knowledge enhancement.

14. The Subcommittee noted with appreciation that a number of national, regional and international efforts to build capacity in space law were being undertaken by governmental and non-governmental entities. Those efforts included encouraging universities to offer modules and seminars on space law; providing fellowships for graduate and postgraduate education in space law; providing financial and technical support for legal research; preparing dedicated studies, papers, textbooks and publications on space law; organizing workshops, seminars and other specialized activities to promote greater understanding of space law; supporting space law moot court competitions; supporting the participation of young professionals in regional and international meetings relating to space law; providing for training and other opportunities to build experience, in particular through internships with space

agencies; and supporting entities dedicated to the study of and research relating to space law in order to assist in the development of national space policies and legislative frameworks.

15. The Subcommittee noted that some member States had provided financial assistance to enable students to attend the Manfred Lachs Space Law Moot Court Competition, held each year during the International Astronautical Congress.

16. The Subcommittee noted with appreciation the United Nations/South Africa Symposium on Basic Space Technology on the theme "Small satellite mission for scientific and technological advancement" held in Stellenbosch, South Africa, from 11 to 15 December 2017, which had included a session on regulatory and legal issues and the long-term sustainability of outer space activities.

17. The Subcommittee noted with appreciation that the tenth United Nations workshop on space law, entitled "Contribution of space law and policy to space governance and space security in the twenty-first century", had been held in Vienna from 5 to 8 September 2016, and that it provided an opportunity for representatives of the permanent missions to the United Nations in Vienna to participate in a capacity-building event.

18. In that connection, some delegations expressed the view that they supported the recommendation emanating from the workshop with regard to encouraging the Office for Outer Space Affairs to conduct targeted capacity-building, education and training in space law and policy, building upon the programme of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER), with the objective of establishing a capacity-building platform.

19. Some delegations expressed the view that, in their region, there was growing interest in space law, and that the Office for Outer Space Affairs should provide support to the region through the organization of training activities on space law.

20. The view was expressed that capacity-building could focus on agenda items that had not been extensively debated in the Subcommittee, including agenda items 7 (a) (Matters relating to the definition and delimitation of outer space) and 7 (b) (Matters relating to the character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union).

21. The view was expressed that the Office for Outer Space Affairs and ICAO should build capacity in relation to and increase awareness of emerging challenges in suborbital activities.

22. The view was expressed that the efforts of the Office for Outer Space Affairs to engage in capacity-building activities to achieve gender equality and the empowerment of women and youth were appreciated.

23. The view was expressed that, in order to achieve the maximum benefit from and increase access by developing countries to critical existing programmes, a concerted effort towards the establishment of affordable and accessible educational opportunities through online and distance-learning platforms should be prioritized by States, and should include the incorporation of tools allowing for virtual participation in conferences.

24. The Subcommittee welcomed with appreciation the first United Nations Conference on Space Law and Policy, organized with the Russian Federation and to be hosted by the State Space Cooperation "Roscosmos" in Moscow from 11 to 13 September 2018. The Subcommittee noted that that Conference was a follow-up activity to the long-standing series of dedicated workshops that had been held for more than a decade, in cooperation with member States.

25. The Subcommittee noted that the Office for Outer Space Affairs had updated the directory of educational opportunities in space law (A/AC.105/C.2/2018/CRP.11),

including information on available fellowships and scholarships, and agreed that the Office should continue to update the directory. In that connection, the Subcommittee invited member States to encourage contributions at the national level for the future updating of the directory.

26. The Subcommittee recommended that States members and permanent observers of the Committee inform the Subcommittee, at its fifty-eighth session, of any action taken or planned at the national, regional or international levels to build capacity in space law.

IX. General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee

27. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 11, entitled "General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee", as a single issue/item for discussion.

28. The representatives of Austria, Canada, Chile, France, Germany, Japan, Pakistan, the Russian Federation, Ukraine, the United Arab Emirates and the United States made statements under agenda item 11. Statements were made by the representative of Nigeria on behalf of the Group of 77 and China and the representative of the Plurinational State of Bolivia on behalf of the Group of Latin American and Caribbean States. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

29. The Subcommittee heard a presentation entitled "A pragmatic, evolutionary path to orbital debris removal via customary international law", by the observer for the National Space Society.

30. The Subcommittee noted with satisfaction that the endorsement by the General Assembly, in its resolution 62/217, of the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space had been an important step in providing all spacefaring nations with guidance on how to mitigate the problem of space debris.

31. The Subcommittee noted with satisfaction that some States were implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of the Committee and/or the Space Debris Mitigation Guidelines of the Inter-Agency Space Debris Coordination Committee and that other States had developed their own space debris mitigation standards based on those guidelines.

32. The Subcommittee also noted that some States were using the space debris mitigation guidelines, the European Code of Conduct for Space Debris Mitigation, International Organization for Standardization standard 24113:2011 (Space systems: space debris mitigation requirements) and ITU recommendation ITU-R S.1003 ("Environmental protection of the geostationary-satellite orbit") as references in their regulatory frameworks for national space activities.

33. The Subcommittee noted with satisfaction that some States had taken measures to incorporate internationally recognized guidelines and standards related to space debris into the relevant provisions of their national legislation.

34. The Subcommittee noted that some States had strengthened their national mechanisms governing space debris mitigation through the nomination of governmental supervisory authorities, the involvement of academia and industry and the development of new legislative norms, instructions, standards and frameworks.

35. The Subcommittee noted with satisfaction that the compendium of space debris mitigation standards adopted by States and international organizations, developed at

the initiative of Canada, Czechia and Germany, enabled all interested stakeholders to benefit from access to a comprehensive and structured set of current instruments and measures on space debris mitigation. In that context, the Subcommittee expressed its appreciation to the Secretariat for updating and maintaining the compendium on a dedicated web page.

36. The view was expressed that it was necessary to enhance the structure of the compendium to make it easier to see progress in the field.

37. Some delegations welcomed the progress of the Working Group on the Long-term Sustainability of Outer Space Activities of the Scientific and Technical Subcommittee in achieving consensus on additional guidelines for the long-term sustainability of outer space activities, including with regard to space debris.

38. Some delegations expressed the view that the guidelines for the long-term sustainability of outer space activities complemented the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, and that it was necessary to review and update the Space Debris Mitigation Guidelines without prejudice to the work of the Working Group on the Long-term Sustainability of Outer Space Activities.

39. The view was expressed that the Space Debris Mitigation Guidelines of the Committee should be aligned with the guidelines for the long-term sustainability of outer space activities.

40. Some delegations expressed the view that it was necessary to update and amend the Space Debris Mitigation Guidelines of the Committee, taking into account the current practice of States and international organizations with expertise in that area.

41. Some delegations expressed the view that it was necessary to update and amend the Space Debris Mitigation Guidelines of the Committee, taking into account current technological developments, the increase in small-satellite activities and the emergence of megaconstellations.

42. Some delegations expressed the view that the transformation of technical debris mitigation guidelines into a legally binding instrument was not necessary, because spacefaring States were motivated to reduce space debris by their own interest in preserving the safety and sustainability of space activities.

43. Some delegations expressed the view that, since approaches to mitigating debris were linked to evolving technologies, it was not necessary to develop legally binding space debris mitigation standards at present.

44. The view was expressed that a non-binding approach could be effective and benefit all States if implemented domestically through policies, regulations and standards.

45. The view was expressed that the Legal Subcommittee should expand its review of the space debris mitigation guidelines, taking into account the possible generation of space debris from space platforms with nuclear power sources on board and the collision of such objects with space debris. The delegation expressing that view also expressed its concern over the atmospheric re-entry of such debris in the southern hemisphere, in particular in the South Pacific, and called upon launching States to adopt measures to control and avoid the generation of space debris.

46. The view was expressed that the guidelines for the long-term sustainability of outer space activities should be adopted in their entirety, which would allow for progress to be made in the substantive consideration of issues related to space debris mitigation and remediation. The view was also expressed that the Legal Subcommittee should develop a list of such issues, in close coordination with the Scientific and Technical Subcommittee, under the agenda item on the long-term sustainability of outer space activities.

47. The view was expressed that the implementation of the recommendations of the Group of Governmental Experts on Transparency and Confidence-building Measures

in Outer Space Activities and the guidelines for the long-term sustainability of outer space activities would contribute to the surveillance and mitigation of space debris and enhance the safety and sustainability of space operations.

48. Some delegations expressed the view that the Subcommittee should set out legal issues relating to space debris and space debris removal, including the legal definition of space debris; the legal status of space debris fragments; the role of the State of registry; jurisdiction and control over the space objects to be declared as space debris, and responsibility and liability for active removal activities, including liability for damage caused as a result of debris remediation operations.

49. The view was expressed that it would be necessary to: (a) establish a uniform understanding of the term "space debris" and how it related to the term "space object"; (b) ensure the observance of the sovereign rights of launching States with regard to dormant space objects or their parts located in near-Earth orbits; (c) develop unified international rules and standards for cataloguing and tracking space debris using modern technological capabilities; and (d) ensure that operational information was available to all interested States.

50. The view was expressed that the Subcommittee could discuss the application and advancement of legal concepts of jurisdiction and control, as well as responsibility and liability in relation to space debris remediation activities, without redefining or reinterpreting those concepts as established in the United Nations treaties on outer space.

51. Some delegations expressed the view that there should be a consultative process on the definition of space debris, involving all States members of the Committee, and that the Committee was the proper forum for that process.

52. The view was expressed that a questionnaire on the legal problems related to active space debris removal should be developed.

53. With regard to the issue of the removal of an object without prior consent or authorization of the State of registry, some delegations expressed the view that it was important for all States to register all space objects launched into outer space.

54. Some delegations expressed the view that there was a need to register, catalogue and track space debris at the international level.

55. The view was expressed that a single international information-exchange centre on space objects and events should be established under the auspices of the United Nations, and that such a centre could become a reliable platform for multilateral cooperation in addressing space debris.

56. The view was expressed that it was imperative that the Legal Subcommittee address the lack of efficient legal mechanisms for implementing space debris mitigation in a timely and efficient manner and using a coherent and common international approach.

57. Some delegations expressed the view that States should take differentiated responsibilities for decongesting outer space, with the spacefaring actors taking the lead.

58. Some delegations expressed the view that the actors that were largely responsible for creating space debris should be most involved in space debris removal activities and that those actors should make available their scientific and legal expertise through cooperation agreements to countries with a lower level of space development in order to ensure that the necessary measures were implemented with regard to the design of spacecraft and end-of-life disposal.

59. The view was expressed that the high cost of implementation of the Space Debris Mitigation Guidelines of the Committee prevented access by emerging spacefaring States to outer space, and since much of the orbital debris was a result of past operations of major spacefaring States, it was the responsibility of those spacefaring States to remove and mitigate the debris impact as well as to assist

emerging spacefaring States, both technically and financially, in mitigating space debris.

60. The view was expressed that an international fund for the removal of space debris should be established to support coordinated efforts on space debris removal by providing means to address technological and financial aspects of such operations, and that financial participation of States in the fund should depend on the role of those States in the creation of space debris.

61. The Subcommittee agreed that States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee should be invited to further contribute to the compendium of space debris mitigation standards adopted by States and international organizations by providing or updating the information on any legislation or standards adopted with regard to space debris mitigation, using the template provided for that purpose. The Subcommittee also agreed that all other States Members of the United Nations should be invited to contribute to the compendium, and encouraged States with such regulations or standards to provide information on them.

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VIII. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space

1. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 10, entitled "Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space", as a single issue/item for discussion.

2. The representatives of Chile, Pakistan and the Russian Federation made statements under agenda item 10. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

3. The Subcommittee recalled that the Safety Framework for Nuclear Power Source Applications in Outer Space (A/AC.105/934), adopted by the Scientific and Technical Subcommittee at its forty-sixth session, in 2009, and endorsed by the Committee at its fifty-second session, also in 2009, had considerably advanced international cooperation in ensuring the safe use of nuclear power sources in outer space and had facilitated the development of international space law.

4. The Subcommittee also recalled the endorsement by the Scientific and Technical Subcommittee of the multi-year workplan of the Working Group on the Use of Nuclear Power Sources in Outer Space of the Scientific and Technical Subcommittee for the period 2017–2021 (A/AC.105/1138, para. 237, and annex II, para. 9).

5. Some delegations expressed the view that more attention should be paid to the legal issues associated with the use of satellite platforms with nuclear power sources in Earth orbits, including the geostationary orbit, in the light of potential accidental re-entry of nuclear power sources into the Earth's atmosphere, reported failures and collisions, which posed a high risk to humanity, the Earth's biosphere and the environment.

6. The view was expressed that the Safety Framework for Nuclear Power Source Applications in Outer Space remained a comprehensive and reliable source of the best available standards for ensuring the safe use of nuclear power sources in outer space, and that any requests for the revision of the Framework should be supported by specific examples demonstrating cases in which the Framework might not be effective.

7. The view was expressed that the use of applications using nuclear power sources should be limited as much as possible and be in conformity with international law, in

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particular the Outer Space Treaty and the Treaty on the Non-Proliferation of Nuclear Weapons, as well as the agreements, conventions, protocols and safeguards of the International Atomic Energy Agency, in order to guarantee the safety, security and sustainability of the outer space environment.

8. The view was expressed that, in the light of the frequent cases of re-entry of space debris into the atmosphere and their subsequent fall, often into the Pacific Ocean, information related to the possible presence of remains of nuclear fuel should be reported to all States that might be affected.

X. General exchange of information on non-legally binding United Nations instruments on outer space

9. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 12, entitled "General exchange of information on non-legally binding United Nations instruments on outer space", as a single issue/item for discussion.

10. The representatives of Chile, Japan, Pakistan and Poland made statements under agenda item 12. A statement was also made by the representative of Nigeria on behalf of the Group of 77 and China. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

11. Some delegations expressed the view that, with the development of space technology and the diversification of space actors, both private and public, it was important to continue to gain a better understanding of non-legally binding United Nations instruments to address new challenges, including with a view to ensuring the safe and sustainable use of outer space.

12. Some delegations expressed the view that non-legally binding United Nations instruments played a significant role in complementing the existing United Nations treaties on the peaceful uses of outer space.

13. Some delegations recalled the Principles Relating to Remote Sensing of the Earth from Outer Space and, in that regard, underscored the concept of non-discriminatory data availability — allowing access on a non-discriminatory basis — as one of the key principles relating to remote sensing of the Earth. Such availability was vital to sustainable development and promoted transparency and confidence among States.

14. Some delegations recalled the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries, as an important instrument for the further promotion of international cooperation with a view to maximizing the benefits of the utilization of space applications for all States. In that Declaration, all spacefaring nations were called upon to contribute to promoting and fostering international cooperation on an equitable basis.

15. Some delegations expressed the view that the Space Debris Mitigation Guidelines of the Committee helped to ensure the sustainability of the space environment. Those delegations encouraged countries to undertake differentiated responsibilities with regard to congestion in outer space, with spacefaring nations taking the lead.

16. The view was expressed that non-legally binding instruments were of particular legal value because they comprised norms and standards of positive law; they acquired additional value through use and practice, which could be evidence of an emerging custom and contribute to the progressive development of international law.

17. The view was expressed that the work of the Working Group on the Long-term Sustainability of Outer Space Activities in preparing a compendium of guidelines for the long-term sustainability of outer space activities was of significant importance,

and that the guidelines, once agreed, should be implemented through mutual cooperation by Member States.

18. The view was expressed that it was important for the Subcommittee to consider developments in the International Law Commission (ILC) under the present item. That delegation was of the view that the work of the Legal Subcommittee and ILC could be mutually supportive in many areas of international law, and that the Subcommittee could draw from the ongoing work of ILC on subsequent agreements and practices in relation to the interpretation of treaties on outer space, in particular since one of the objectives of the Subcommittee was to study the nature of legal problems that could arise from the exploration of outer space.

19. The view was expressed that there was a need to work on the development of guidelines and principles to address legal challenges, including those related to space traffic management, space debris and space exploration and exploitation. That delegation expressed the view that an international framework for space traffic management should be set up, including a United Nations-based information sharing mechanism, comprising a database on objects and events in space and procedures for the operation of the mechanism.

20. The Subcommittee noted with appreciation the dedicated web page on non-legally binding United Nations instruments of the Office for Outer Space Affairs. The web page comprised the compendium on mechanisms adopted by States and international organizations in relation to non-legally binding United Nations instruments on outer space and the related updated questionnaire for States and international organizations, together with other documents relevant to the present agenda item.

21. The Subcommittee encouraged States members of the Committee and international intergovernmental organizations having permanent observer status with the Committee to share information on their practices related to non-legally binding United Nations instruments on outer space and submit their responses to the Secretariat for the purpose of updating the compendium.

XIV. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-eighth session

22. Pursuant to General Assembly resolution 72/77, the Subcommittee considered agenda item 16, entitled "Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-eighth session", as a regular item on the agenda. Under the item, the Subcommittee also considered matters related to the organization of work.

23. The representatives of Australia, Belgium, Brazil, China, Czechia, Greece, Luxembourg, Mexico, the Netherlands, the Russian Federation and the United States made statements under agenda item 16. During the general exchange of views, statements relating to the item were also made by representatives of other member States.

24. The Subcommittee agreed that the following items be proposed to the Committee for inclusion in the agenda of the Subcommittee at its fifty-eighth session:

Regular items

1. Adoption of the agenda.
2. Statement by the Chair.
3. General exchange of views.
4. Information on the activities of international intergovernmental and non-governmental organizations relating to space law.

5. Status and application of the five United Nations treaties on outer space.

6. Matters relating to:

(a) The definition and delimitation of outer space;

(b) The character and utilization of the geostationary orbit, including consideration of ways and means to ensure the rational and equitable use of the geostationary orbit without prejudice to the role of the International Telecommunication Union.

7. National legislation relevant to the peaceful exploration and use of outer space.

8. Capacity-building in space law.

Single issues/items for discussion

9. Review and possible revision of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

10. General exchange of information and views on legal mechanisms relating to space debris mitigation and remediation measures, taking into account the work of the Scientific and Technical Subcommittee.

11. General exchange of information on non-legally binding United Nations instruments on outer space.

12. General exchange of views on the legal aspects of space traffic management.

13. General exchange of views on the application of international law to small-satellite activities.

14. General exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources.

New items

15. Proposals to the Committee on the Peaceful Uses of Outer Space for new items to be considered by the Legal Subcommittee at its fifty-ninth session.

25. Some delegations expressed the view that consideration of the item on the general exchange of views on potential legal models for activities in the exploration, exploitation and utilization of space resources should be included on the agenda of the Working Group on the Status and Application of the Five United Nations Treaties on Outer Space, in order to stimulate a focused debate.

26. Some delegations expressed the view that the aim of providing for such considerations in the Working Group was not clear and that the exchange of views on the item had already been provided for in the plenary.

27. The Subcommittee noted that interested delegations would be holding consultations during the intersessional period, with a view to presenting to the Subcommittee, at its fifty-eighth session, a proposal for its consideration containing objectives and modalities for the inclusion of that item on the agenda of the Working Group.

28. The Subcommittee agreed that IISL and ECSL should again be invited to organize a symposium, to be held during the fifty-eighth session of the Subcommittee, taking into account the need for equitable geographical and gender representation at the symposium in order to reflect a broad range of opinions, in cooperation with other interested academic entities for that purpose.

29. The Subcommittee noted that its fifty-eighth session had been tentatively scheduled to be held from 1 to 12 April 2019.